IN THE SPECIFICATION

Please amend the paragraphs of the specification as follows:

On page 1, please amend paragraph [0001] with the following paragraph:

The present Application for Patent is a Continuation and claims priority to Patent Application No. 09/892,378 entitled "METHOD AND APPARATUS FOR SELECTING A SERVING SECTOR IN A DATA COMMUNICATION SYSTEM," filed June 26, 2001, now ~~allowed~~ U.S. Patent No. 6,757,520, issued June 29, 2004, and assigned to the assignee hereof and hereby expressly incorporated by reference herein.

On page 2, please amend paragraph [0005] with the following paragraph:

A multiple-access communication system may be a wireless or wire-line and may carry voice and/or data. An example of a communication system carrying both voice and data is a system in accordance with the IS-95 standard, which specifies transmitting voice and data over the communication channel. A method for transmitting data in code channel frames of fixed size is described in detail in U.S. Patent No. 5,504,773, entitled "METHOD AND APPARATUS FOR THE FORMATTING OF DATA FOR ~~TRANSMISSION",~~ TRANSMISSION," assigned to the assignee of the present invention. In accordance with the IS-95 standard, the data or voice is partitioned into code channel frames that are 20 milliseconds wide with data rates as high as 14.4 Kbps. Additional examples of a communication systems carrying both voice and data comprise communication systems conforming to the "3rd Generation Partnership Project" (3GPP), embodied in a set of documents including Document Nos. 3G TS 25.211, 3G TS 25.212, 3G TS 25.213, and 3G TS 25.214 (the W-CDMA standard), or "TR-45.5 Physical Layer Standard for cdma2000 Spread Spectrum Systems" (the IS-2000 standard).

On page 4, please amend paragraph [0010] with the following paragraph:

Yet another significant difference between voice services and data services is that the former requires a reliable communication link. When a mobile station, communicating with a first base station, moves to the edge of the associated cell or sector, the mobile station initiates a

simultaneous communication with a second base station. This simultaneous communication, when the mobile station receives a signal carrying equivalent information from two base stations, termed soft handoff, is a process of establishing a communication link with the second base station while maintaining a communication link with the first base station. When the mobile station eventually leaves the cell or sector associated with the first base station and breaks the communication link with the first base station, it continues the communication on the communication link established with the second base station. Because the soft handoff is a "make before break" mechanism, the soft handoff minimizes the probability of dropped calls. The method and system for providing a communication with a mobile station through more than one base station during the soft handoff process are disclosed in U.S. Patent No. 5,267,261, entitled "MOBILE STATION ASSISTED SOFT HANDOFF IN A CDMA CELLULAR COMMUNICATIONS SYSTEM," assigned to the assignee of the present invention. Softer handoff is the process whereby the communication occurs over multiple sectors that are serviced by the same base station. The process of softer handoff is described in detail in ~~co-pending~~ U.S. Patent Application Serial No. 08/763,498, entitled "METHOD AND APPARATUS FOR PERFORMING HANDOFF BETWEEN SECTORS OF A COMMON BASE STATION," filed December 11, 1996, now U.S. Patent No. 5,933,787, issued August 3, 1999, assigned to the assignee of the present invention. Thus, both soft and softer handoff for voice services result in redundant transmissions from two or more base stations to improve reliability.

On page 6, please amend paragraph [0015] with the following paragraph:

FIG.1 illustrates a conceptual diagram of [[an]] a High Data Rate (HDR) communication system;

On page 6, please amend paragraph [0021] with the following paragraph:

FIGs. 7 and 8 illustrate the Decision phase for a sector selection when the DRC of a current serving sector is "in-lock" for the Message Based DRC Lock method[[.]];

On page 6, please amend paragraph [0022] with the following paragraph:

FIG. 9 illustrates the Decision phase for the sector selection when the DRC of the current serving sector is "out-of-lock" for the Message Based DRC Lock method[[.]];

On page 7, please amend paragraph [0033] with the following paragraph:

The term access network is used exclusively herein to mean a collection of access points [[(AP)]] (APs) and one or more access point controllers. The access network transports data packets between multiple access terminals [[(AT)]] (ATs). The access network may be further connected to additional networks outside the access network, such as a corporate intranet or the Internet, and may transport data packets between each access terminal and such outside networks.

On page 8, please amend paragraph [0040] with the following paragraph:

The term softer ~~hand-off~~ handoff is used exclusively herein to mean a communication between a subscriber station and two or more sectors, wherein each sector belongs to the same cell. In the context of the IS-95 standard, the reverse link communication is received by both sectors, and the forward link communication is simultaneously carried on one of the two or more sectors' forward links. In the context of the IS-856 standard, data transmission on the forward link is non-simultaneously carried out between one of the two or more sectors and the AT.

On page 9, please amend paragraph [0042] with the following paragraph:

The term soft/softer handoff delay is used exclusively herein to indicate the minimum interruption in service that a subscriber station would experience following a handoff to another sector. Soft/softer handoff delay is determined based on whether the sector, (currently not serving the subscriber station, or the non-serving sector) to which the subscriber station is re-pointing is part of the same cell as the current serving sector. If the non-serving sector is in the same cell as the serving sector, then the softer handoff delay is used, and if the non-serving sector is in a cell different from the one that the serving sector is part of, then the ~~soft-handoff~~ soft handoff delay is used.

On page 9, please amend paragraph [0048] with the following paragraph:

FIG. 1 illustrates a conceptual diagram of an HDR communication system capable of performing re-pointing in accordance with embodiments of the present invention, e.g., a communication system in accordance with the IS-856 standard. An AP 100 transmits data to an AT 104 over a forward link 106(1) and receives data from the AT 104 over a reverse link 108(1). Similarly, an AP 102 transmits data to the AT 104 over a forward link 106(2) and receives data from the AT 104 over a reverse link 108(2). In accordance with one embodiment, data transmission on the forward link occurs from one AP to one AT at or near the maximum data rate that can be supported by the forward link and the communication system. Other channels of the forward link, e.g., control channel, may be transmitted from multiple APs to one AT. Reverse link data communication may occur from one AT to one or more APs. The AP 100 and the AP 102 are connected to a controller 110 over backhauls 112(1) and 112(2). The term backhaul is used to mean a communication link between a controller and an AP. Although only two [[AT's]] <u>ATs</u> and one AP are shown in FIG. 1, one of ordinary skill in the art recognizes that this is for pedagogical purposes only, and the communication system can comprise a plurality of [[AT's]] <u>ATs</u> and [[AP's]] <u>APs</u>.

On page 10, please amend paragraph [0049] with the following paragraph:

Initially, the AT 104 and one of the [[AP's]] <u>APs</u>, e.g., the AP 100, establish a communication link using a predetermined access procedure. In this connected state, the AT 104 is able to receive data and control messages from the AP 100 and is able to transmit data and control messages to the AP 100. The AT 104 continually searches for other APs that could be added to the AT 104 active set. The active set comprises a list of the APs capable of communication with the AT 104. When such an AP is found, the AT 104 calculates a quality metric of the AP's forward link, which in one embodiment comprises a ~~signal to interference and noise~~ <u>signal-to-interference-and-noise</u> ratio (SINR). In one embodiment, the AT 104 searches for other APs and determines the AP's SINR in accordance with a pilot signal. Simultaneously, the AT 104 calculates the forward link quality metric for each AP in the AT 104 active set. If the forward link quality metric from a particular AP is above a predetermined add threshold or below a predetermined drop threshold for a predetermined period of time, the AT

104 reports this information to the AP 100. Subsequent messages from the AP 100 direct the AT 104 to add to or to delete from the AT 104 active set the particular AP.

On page 11, please amend paragraph [0052] with the following paragraph:

At each time time-slot, the AP can schedule data transmission to any of the ATs that received the paging message. An exemplary method for scheduling transmission is described in U.S. Patent No. 6,229,795, entitled "System for allocating resources in a communication system,[["]]" assigned to the assignee of the present invention. The AP uses the rate control information received from each AT in the DRC message to efficiently transmit forward link data at the highest possible rate. In one embodiment, the AP determines the data rate at which to transmit the data to the AT 104 based on the most recent value of the DRC message received from the AT 104. Additionally, the AP uniquely identifies a transmission to the AT 104 by using a spreading code which is unique to that mobile station. In the exemplary embodiment, this spreading code is the long pseudo noise (PN) code, which is defined by the IS-856 standard.

On page 12, please amend paragraph [0053] with the following paragraph:

The AT 104, for which the data packet is intended, receives the data transmission and decodes the data packet. In one embodiment, each data packet is associated with an identifier, e.g., a sequence number, which is used by the AT 104 to detect either missed or duplicate transmissions. In such an event, the AT 104 communicates via the reverse link data channel the sequence numbers of the missing data units. The controller 110, which receives the data messages from the AT 104 via the AP communicating with the AT 104, then indicates to the AP what data units were not received by the AT 104. The AP then schedules a retransmission of such data units.

On page 13, please amend paragraph [0059] with the following paragraph:

FIG. 2 illustrates an exemplary forward link waveform 200. For pedagogical reasons, the forward link waveform 200 is modeled after a forward link waveform of the above-mentioned HDR system. However, one of ordinary skill in the art will understand that the teaching is applicable to different waveforms. Thus, for example, in one embodiment the waveform does

not need to contain pilot signal bursts, and the pilot signal can be transmitted on a separate channel, which can be continuous or bursty. The forward link waveform 200 is defined in terms of frames. A frame is a structure comprising 16 time-slots 202, each time-slot 202 being 2048 chips long, corresponding to a 1.66-ms[[.]] time-slot duration, and, consequently, a 26.66-ms[[.]] frame duration. Each time-slot 202 is divided into two half-time-slots ~~202a and 202b~~ 202A and 202B, with pilot bursts ~~204a and 204b~~ 204A and 204B transmitted within each half-time-slot ~~202a and 202b~~ 202A and 202B. In the exemplary embodiment, each pilot burst ~~204a and 204b~~ 204A and 204B is 96 chips long, and is centered at the mid-point of its associated half-time-slot ~~202a and 202b~~ 202A and 202B. The pilot bursts ~~204a and 204b~~ 204A and 204B comprise a pilot channel signal covered by a Walsh cover with index 0. A forward medium access control channel (MAC) 206 forms two bursts, which are transmitted immediately before and immediately after the pilot burst 204 of each half-time-slot 202. In the exemplary embodiment, the MAC is composed of up to 64 code channels, which are orthogonally covered by 64-ary Walsh codes. Each code channel is identified by a MAC index, which has a value between 1 and 64, and identifies a unique 64-ary Walsh cover. A reverse power control channel (RPC) is used to regulate the power of the reverse link signals for each subscriber station. The RPC is assigned to one of the available MACs with MAC index between 5 and 63. The MAC with MAC index 4 is used for a reverse activity channel (RA), which performs flow control on the reverse traffic channel. The forward link traffic channel and control channel payload is sent in the remaining portions [[208a]] 208A of the first half-time-slot [[202a]] 202A and the remaining portions [[208b]] 208B of the second half-time-slot [[202b]] 202B.

On page 15, please amend paragraph [0062] with the following paragraph:

However, the AT 104 can directly determine neither the reverse link SINR nor the DRC erasure rate. Both the reverse link SINR and the DRC erasure rate may be directly determined by the sectors in the AT 104 active set. The sector(s) then supplies the AT 104 with the determined values of the reverse link SINR or the DRC erasure rate via a feedback loop. In order for a sector to transmit accurate information regarding the reverse link SINR or DRC erasure rate, the sector must use some forward link capacity. In order to minimize the impact on forward link capacity, the reverse link SINR or the DRC erasure rate is sent with very low granularity. In one

embodiment, the granularity is one bit. Furthermore, a consideration of a feedback loop speed versus a performance of the Reverse Link Traffic Channel performance must be made.

On page 15, please amend paragraph [0066] with the following paragraph:

The processing method at the AP in accordance with one embodiment comprises [[there]] three phases. In the first phase, mapping a DRC Erasure and/or a valid DRC to a binary form generates a DRC Erasure Bit. In the second phase, processing the DRC Erasure Bits generates a DRC erasure rate. In the third phase, sampling the processed DRC erasure rate every control channel period generates a DRC Lock Bit.

On page 16, please amend paragraph [0072] with the following paragraph:

In step 312, the DRC Erasure Bit is processed to generate a DRC erasure rate. In one embodiment, the processing comprises filtering by a filter with a pre-determined time constant. In one embodiment, the filter is realized in a digital domain. The value of the pre-determined time constant may be established in accordance with system simulation, by experiment or via other engineering methods known to one of ordinary ~~skills~~ skill in the art as an optimum in accordance with:

reliability of an estimate ensuing from a choice of the time constant, and

latency of an estimate ensuing from the choice of the time constant.

On page 17, please amend paragraph [0078] with the following paragraph:

In one embodiment, the values DRC_Erasure_Th1 and DRC_Erasure_Th2 are pre-determined in accordance with the communication system simulation, by experiment or other engineering methods known to one of ordinary ~~skills~~ skill in the art. In another embodiment, the values DRC_Erasure_Th1 and DRC_Erasure_Th2 are changed in accordance with the change of the conditions of the communication link. In either embodiment, the values of DRC_Erasure_Th1 and DRC_Erasure_Th2 are selected to optimize the following requirements to:

minimize the dead-zone (when the DRC Lock Bit is not updated); and

transmit the most current reverse link channel state information to the AT.

On page 17, please amend paragraph [0080] with the following paragraph:

In step 318, the DRC erasure rate is compared to the DRC_Erasure_Th1. If the DRC erasure rate is less than the DRC_Erasure_Th1, the method continues in step [[322]] 324; otherwise, the method continues in step [[324]] 322.

On page 19, please amend paragraph [0099] with the following paragraph:

In one embodiment, the minimum value for the credits (both switching and monitoring) is zero, and the maximum for the credits is equal to a soft handoff delay or a softer handoff delay. The delay used is determined based on whether or not the non-serving sector is in the same cell as the serving sector. If the non-serving sector is in the same cell as the serving sector, then the softer handoff delay is used, and if the non-serving sector is in a cell different from the one that the serving sector is part of, then the ~~soft handoff~~ soft-handoff delay is used.

On page 23, please amend paragraph [00121] with the following paragraph:

In step 706, an inquiry is made whether a sector designated by the variable count is the current serving sector. If the test is positive, the method continues in step [[722]] 724; otherwise, the method continues in step 708.

On page 23, please amend paragraph [00122] with the following paragraph:

In step 708, a value of the variable [[CS_NS]] CS_SS identified by the variable count is compared against the soft (or softer) handoff delay (NS_S_Th) for the non-serving sector. If the value of the variable [[CS_NS]] CS_SS is not equal to the NS_S_Th, the method continues in step 710; otherwise, the method continues in step 712.

On page 24, please amend paragraph [00125] with the following paragraph:

In step 714, a value of the variable CM_NS identified by the variable count is compared against the soft (or softer) handoff delay (NS_S_Th) for the non-serving sector. If the value of the variable [[CS_NS]] CM_NS is not equal to the NS_S_Th for the non-serving sector, the method continues in step 716; otherwise, the method continues in step 720.

On page 27, please amend paragraph [00157] with the following paragraph:

The "out-of-lock" sector selection in accordance with one embodiment is illustrated in FIG. 9. In step 902, a variable ~~CM_NS_count~~ CS_NS_COUNT is set to zero. The method continues in step 904.

On page 27, please amend paragraph [00160] with the following paragraph:

In step 908, an inquiry is made whether the sector designated by the variable count is the current serving sector. If the test is positive, the method continues in step [[914]] 910; otherwise, the method continues in step [[910]] 914.

On page 35, please amend paragraph [00223] with the following paragraph:

In step 1232, the value of [[CM_NS]] CS_NS identified by the variable count is incremented by one and set to the minimum of the soft (or softer) handoff delay (NS_S_Th) and the decremented value. The method continues in step 1236.

On page 36, please amend paragraph [00227] with the following paragraph:

Therefore, in another embodiment, the DRC Lock Bit is updated at a higher rate and punctured into an RPC channel one or more times every frame. The term punctured is used herein to mean sending the DRC Lock Bit instead of a RPC bit. The DRC Lock Bit is sent by all the AP's in the AT 104 active set. In one embodiment, a transmission of the DRC Lock Bit to each AT is staggered, i.e., referenced off a frame offset assigned to the AT. This allows for allocating additional power to the RPC channel during the transmission of the DRC Lock Bit in order to provide an additional margin to reduce the DRC Lock Bit errors at the AT; therefore, preventing an erroneous handoffs and possible loss in forward link throughput. The AT 104 uses the DRC Lock Bit information to select the serving AP.

On page 36, please amend paragraph [00233] with the following paragraph:

In step 1312, the DRC Erasure Bit is processed to generate a DRC erasure rate. In one embodiment, the processing comprises filtering by a filter with a pre-determined time constant.

In one embodiment, the filter is realized in a digital domain. The value of the pre-determined time constant is established in accordance with system simulation, by experiment or other engineering methods known to one of ordinary skills in the art as an optimum in accordance with:

reliability of an estimate ensuing from a choice of the time constant[[,]]; and

latency of an estimate ensuing from a choice of the time constant.

On page 38, please amend paragraph [00248] with the following paragraph:

In step 1330, the DRC Lock Bit is punctured into the RPC channel in accordance with the timing signal obtained in step 1314. The method returns to step [[1304]] 1306.

On page 41, please amend paragraph [00271] with the following paragraph:

In step 1608, the DRC_LOCK of the non-serving sector identified by the variable count is compared to 1. If the DRC_LOCK is equal to 1, the method continues in step 1612; otherwise, the method continues in step [[1610]] 1614.